

PLUTONIUM RECOVERY MODIFICATION PROJECT
PROJECT MANAGEMENT OFFICE



000025192

PROJECT MEMORANDUM

PM: NG

Date: May 11, 1988

Ref:

To: B. B. Melton, BDM

From: G. L. Underberg, BDM

Subject: Review of the PRMP EA

Please find attached my review comments of Volume 1 of the Draft Remedial Investigation Work Plan; Low Priority Solid Waste Management Units. The general comments on page one cover my primary concerns.

Attachment

cc:

R. D. Reed, Chief, S&E, RFAO

K. J. Schneider, S&E, RFAO

J. A. Garcia, S&E, RFAO

ADMIN RECORD

REVIEW COMMENTS ON
DRAFT REMEDIAL INVESTIGATION WORK PLAN
LOW PRIORITY SOLID WASTE MANAGEMENT UNITS

VOLUME 1: BACKGROUND

G. L. UNDERBERG
THE BDM CORPORATION

General Comments

- 1) There seems to be a lack of consistency in the recommended actions for the individual SWMUs. For example, SWMU 149 was through a documented remedial action but a more thorough waste characterization is proposed. On the other hand, possible radionuclide contamination at SWMU 148 does not warrant further treatment. It is not immediately apparent from the discussion that the level of certainty in the waste form characterization supports rejecting actions such as soil sampling at SWMU 148. Often groundwater monitoring is recommended without soil sampling at depth and vice versa. Revisions to the document should expand on technical support of the recommended actions with an emphasis on consistency among SWMUs.
- 2) This work plan does not recognize the groundwater quality data that has been collected since emplacement of the 1986 monitoring wells. Inclusion of this data would certainly enhance discussion of potential contamination.
- 3) Discussions of monitoring wells should specify alluvial or bedrock monitoring. There is also a consistent lack of rigor in use of the term "aquifer" when "lenticular sand or gravel" may be more appropriate considering the discontinuous nature of alluvial stratigraphy and the resulting lack of continuity between the points of contamination and off-site alluvial wells.
- 4) There is a varying level of detail among the individual SWMU discussions. Attention should be given to balancing the discussions and explicitly stating the reasons for less detailed information (i.e. insufficient data or insignificant consequence) to convey to the reader/reviewer that the level of effort has been as uniform as possible.

Specific Technical Comments

1) Page 8, Section 2.2.2: Alluvial boreholes on the 881 Hillside show less than 20 ft of alluvium; thickness is less than 2 ft in some boreholes. This is pointed out on page 11, second paragraph. The Rocky Flats Alluvium does not consist of just clayey gravel but is predominated by clay and clayey sandstone and silty sandstone. Suggest changing last sentence to read "...topsoil layer underlain by 0 to 50 feet of clay, sandy clay, and clayey gravel."

2) Page 11, second paragraph, second to last sentence: This sentence does not make sense as written. The bedrock at the plant site is the Arapahoe Formation that contains discontinuous sand and sandstone lenses. To state that groundwater flow in these lenses is correlated with thicker alluvium implies groundwater retention in the alluvium and leakage through upper bedrock claystone. This has not been demonstrated to be significant. I suggest removing bedrock from this sentence and discuss buried channels within the alluvium only.

3) Page 11, third paragraph, first sentence: The Rocky Flats Alluvium terminates east of the plant boundary which is the down-gradient direction. Please change sentence accordingly.

4) Page 11, first paragraph, first sentence: There is also significant amounts of disturbed colluvium resulting from on-site construction that overly the Rocky Flats Alluvium. This should be added to the list of (potential) groundwater aquifers.

5) Page 36, Section 3.6.4: Why are groundwater investigations (i.e. alluvial wells) not recommended as further action? Are wells 20-86 and 22-86 sufficient? These wells would serve as good indicators of alluvial contamination but are not discussed at all in section 3.6.3. If contamination from the solar ponds would overwhelm any potential contribution from SWMU's 124 and 125, then this should be stated.

6) Page 38, Section 3.7.4: Same as comment 5.

7) Page 39, Section 3.8.2, second paragraph: Use of the term "highly permeable" implies something on the order of a well sorted sand or gravel. The logs from alluvial wells in other areas of the plant indicate only discontinuous lenticular sand and gravel interbedded with clay and clayey sand. Without information on this specific location, "highly permeable"

should be toned down to "permeable." Likewise, the 10 to 20 ft depth to groundwater is only a guess and should be indicated as such.

8) Page 50, Section 3.12.4: Monitor wells should be coupled with in-field radioactive surveys of the cuttings and/or core along with more specific laboratory analyses if the in-field survey warrants. This needs to be stated explicitly somewhere in this document even if it is considered part of the "soil investigations." In general this point needs to be considered in all of the recommended actions involving monitoring wells.

9) Pages 59-61: Indicate the number of samples and the period of sampling on which the water quality information is based.

10) Page 64, Section 3.15.4, first paragraph: Current monthly monitoring programs provide water quality information for the A, B, and C series retention ponds as well as Woman and Walnut Creeks. Indicate in this paragraph that this information is available and will be used.

11) Page 64, Section 3.15.4, second paragraph: Use of the term aquifer suggests an exploitable groundwater resource underlies the ponds. It is more likely that only discontinuous sand and gravel lenses have a potential for immanent contamination with slow leakage down to the Arapahoe Sandstone. This paragraph should be rewritten in consideration of using boreholes to evaluate local stratigraphy (bedrock and alluvial) and the potential for aquifer contamination. An emphasis should be placed on localized alluvial aquifer contamination as opposed to a more regional, exploitable aquifer.

12) Page 64, Section 3.15.4, third paragraph: This paragraph does not recognize the number of alluvial and bedrock wells that have been drilled in the Remedial Investigation and groundwater monitoring work conducted at the High Priority Sites. It should state that available information will be evaluated for adequacy and completeness before any new wells will be placed.

13) Page 66, Section 3.16.4: On the previous page process waste lines are indicated to be contributing waste. This section needs to be more definitive by indicating the types of waste other than radionuclides (which are expected from the laundry waste lines) that are possible and what sampling measure will be taken to detect them.

14) Page 68, Section 3.17.4: As indicated in Section 3.17.2, it may be difficult to distinguish SWMU 144 contamination from other nearby sources.

Groundwater monitoring wells by themselves are probably not sufficient to isolate contamination due to intermingled plumes. Therefore further action should include soil sampling near the SWMU source that extends well into the bedrock to isolate the plume.

15) Page 72, second paragraph:

- What concrete slab? This should be discussed in section 3.19.1.
- Discuss level of contamination in well 61-86.
- The ubiquitous "aquifer" is again discussed. Specify whether this is the unconfined alluvial aquifer or the Arapahoe. If the former, indicate what the no contamination determination is based on.

16) Page 73, Section 3.20.1: Please reference the source for information on the number of spills and elaborate on potential radionuclide contamination.

17) Page 74, Section 3.20.3: Discuss present water quality assessment of well 44-86.

18) Page 86, Section 3.25.4: At least one soil sampling borehole should be installed through the asphalt at SWMU 156.1 to determine the adequacy of the undocumented cleanup activity.

19) Page 89, Section 3.26.3, second paragraph: State what a "very permeable" determination of the soil is based on. A log of borehole 44-86? Also, discuss any soil sampling that might have been conducted during drilling of 44-86.

20) Page 98, Sections 3.30.1 - 3.30.4: Since there is no information available on the amount of material spilled, a radiometric survey should be conducted in the field to assess possible soil contamination from pavement runoff along Cedar Avenue.

21) Page 103, Section 3.32.4: Discuss water quality of samples currently available from well 61-86.

22) Page 106, Section 3.33.4: Discuss water quality of samples currently available from well 29-86.

23) Page 111, Section 3.36.2: Discuss the nature of the site covering.

24) Page 117, Section 3.38.4: If surface soil contamination is considered unlikely, then why is only a radiometric survey proposed? Borehole samples should be taken to evaluate the vertical contaminant distribution.

Editorial Comments

1) Page 29, third paragraph: The tilde prefixing 50 is redundant as it is preceded by "approximately."

2) Page 32, top paragraph: The location of SWMUs 120.1 and 120.2 is given on Figure 3-10, not Figure 3-1.

3) Page 37, Section 3.7.2, last sentence: Figure 3-3 does not extend far enough east to show drainage intersecting North Walnut Creek. Please refer to the figure that does.

4) Figures 3-x: The use of these figures could be greatly enhanced with a complete site map showing the locations of the detailed SWMU location maps. It is cumbersome to have to flip through these individual disconnected figures and determine the exact site location.

5) Section 3.9.3, second paragraph: The first sentence discussing surface water releases should be in a separate paragraph as it is confused with the groundwater contamination.

6) Page 49, third complete sentence on page: Change "no beneath" to "not beneath."

7) Page 62, first paragraph: Change "if a toxic" to "is a toxic."

8) Page 62, third "paragraph:" Sentence fragment is out of place: trichloroethane is not discussed as a contaminant.

9) Page 67, second paragraph, last sentence: Change "as" to "of."

10) Page 69, first full paragraph: "(gross of)" ?

11) It would be very handy to have the map location (i.e. specific figure number) given the each SWMU's heading section (3.X) to avoid having to scan the entire section for the location.

12) The toxicology discussions of each contaminant should be lifted and condensed into a separate toxicology section to avoid needless repetition throughout this document.

Comments - Health and Safety Plan CEARP RI Work Plan - Preparation for the
Low Priority Areas

5/10/88 - Kari Schneider

I had no specific comments on this remedial investigation workplan. In general, the plan seemed to cover all potential hazards that could exist or may occur at a remedial investigation site during field investigation and it presents the information in a well-organized, comprehensible matter. One suggestion is that section 13.0 (acronyms) could be moved to the front of the document as the majority of the acronyms occur within the text at the front of the document - this is merely a suggestion for the convenience of the reader.

COMMENTS - LOW PRIORITY SAMPLING PLAN

5/10/88 - Jolene Garcia, DOE

COMMENT NUMBER	PAGE/SECTION	COMMENT
1.	General Comment	Table of contents missing.
2.	pp. 2,3 Appx. A	These pages are missing.
3.	p. 4 Appx. A 2.3.2	Please explain the basis for sampling all trenches in "ten" areas. It seems that the sampling grids should be representative of the surface areas. Also; the basis for sampling to a depth of 5 feet should be explained. What depth is water table?
4.	p.4 Appx. A 2.3.3	There are no upgradient wells noted on the figure. If none exist, then the existing wells will not be adequate.
5.	General	The quality of the existing maps (figures) is poor. Several Figures are not included (Appendices D,E,F,G,H, and J). One large clear map with all referenced SWMU's may be more useful than separate figures.
6.	p.4 typo Appx. B. 2.2.1	Last part of sentence should read, "... and whether contaminant concentrations are increasing or decreasing.
7.	p.5 Appx. B 2.3.1	The reference that additional surface water samples will be collected upstream and downstream of each pond to determine if contaminants are being transported to the ponds, and if contaminants are still being released from the ponds, implies that we currently do not have any system in place for determining this. The current routine sampling indicates whether there is or is not release from the ponds.

8. p. 6
Appx. B
2.3.2 Well 11-86 is not referenced on the figure. Inclusion of all well locations on the suggested large map (comment 5) would also be very useful. The figure also does not reflect the referenced "sufficient number of wells upgradient to Pond A-1."
9. p. 1
Appx. C
1.1 Discharge from Pond B-3 is also required to meet the NPDES permit requirements, but not referenced here with B-5.
10. p. 1
Appx. C Need to insert "o" to ponds in "...drying beds west of the B-series ponds,...". Same paragraph: Has all of the contamination in the area where the treatment sludge was dried (west of B-series ponds) been removed?
11. p. 4
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2.2.1 What is the explanation for "unavailable data"? Will this data be included prior to initial draft transmittal?
12. p. 5
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2.3.1 Again, please reference basis for sampling grid specification/procedure. "Hot spots" is not explanatory. This is stated throughout the text. Please specify.
13. p. 5
Appx. D
2.3.1 Same as Comment 12. "Significantly" above background, is not explanatory.
14. p. 5
Appx. D
2.3.2 Why will surface count rates centers be different for specific SWMU's? Is there to be continuity between the 30 foot center SWMU's and those areas that have had clean-up? If so, why is this not encompassing those SWMU's listed on p.1 of Appx. D? There is a typo in last sentence on this page also (coneters).

15.

General
comment

The remaining Appendices were reviewed without finding concerns of any difference to the previously noted comments. There seems to be various examples of varying sensitivity in sampling methodologies, which are in need of further explanation. It appears that there is not enough data, at this point, to determine the specific depths (above the water table) and grid lay-outs. If the extent or exact sources of contamination contribution is unknown, then it would be better to take the more conservative approach in determining these parameters. There are also several typographical mistakes throughout the remainder of the text to be corrected prior to initial draft transmittal.

16.

General
comment

No specific comments on the QAPP for Low Priority Sites.

COMMENTS - LOW PRIORITY SAMPLING PLAN

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CORRES. CC
OUTGOING LTR NO.**EG&G ROCKY FLATS**

EG&G ROCKY FLATS, INC.

ROCKY FLATS PLANT, P.O. BOX 464, GOLDEN, COLORADO 80402-0464 • (303) 966-7000

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DIST.	
ALLHOFF, F.H.	
BREEN, J. H.	
BRETZKE J.C.	
BURLINGAME, A.H.	
CROUCHER, D.W.	
DAVIS, J.G.	
FERRERA, D.W.	
FERRIS, L.R.	
FRANCIS, G.E.	
GOODWIN, R.	
HEALY, T.J.	
KERSH, J.M.	XX
KIRBY, W.A.	
MAJESTIC, J.B.	
McKINLEY, K.B.	
MELLEN, J.B.	
MORGAN, R.V.	XX
PARNELL, R.F.	
POTTER, G.L.	XX
RHOADES, J.L.	XX
RISNER, V.L.	
SANFORD, T.H.	
SHANNON, W.M.	
VAN LEUVEN, D.B.	
WARNER, B.P.	
YOUNG, E.R.	
EDRICH, T.E.	XX
ELIOWM	XX
BETCHER, D.H.	
CARNIVAL, G.J.	
HARMAN, L.K.	
HEBERT, J.L.	
HOFFMAN, R.B.	
KLAMMAN, R.L.	
KREIG, D.M.	
LOUDENBERG, G.E.	
NAIMON, E.R.	
NEWBY, R.L.	
TURNER, H.I.	
VELASQUEZ, R.N.	
GREGORY-FROST	XX
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EDRICH, P.W.	XX
SMITH, T.A.	XX
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ES. Baum
DATE 6/28/90

IN REPLY TO LTR NO.

PC#
LTR APPROVALS
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ORIG & TYPIST INITIALS

LAGF-dkf
RF-46469 (Rev 4/90)

JUN 29 1990



000025193

90-RF-3708

Robert M. Nelson, Jr.
Manager
DOE, RFO

Attn: J. Kiefer

TREATABILITY STUDY NOTIFICATION TO CDH

Enclosed is a draft letter to the Colorado Department of Health (CDH) which provides courtesy notification of our intent to study stabilization of hazardous, low-level mixed and TRU mixed wastes using a Joule Heated Glass Melter process. These glass encapsulation studies will be conducted on nitrate salts, and on polyvinyl chloride (PVC), combustibles and paper contaminated with trichloroethylene (TCE), trichloroethane (TCA), carbon tetrachloride, and other organic compounds as yet not determined.

The studies will be conducted in accordance with the "treatability study exemption" rule (6 CCR 1007-3 261.4[e,f]). CDH approved the plant's request to conduct treatability studies in a letter dated February 7, 1989, provided that the studies are conducted in accordance with the treatability study exemption regulations. In addition, Rocky Flats Plant has agreed to provide courtesy notification to CDH prior to beginning future treatability studies. The enclosed letter will meet the notification requirements of the regulations and of the agreement with CDH.

If you have any questions or require additional information, please contact Pam Edrich at extension 7752 or Laurie Gregory-Frost at 5877.

Jack L. Rhoads

J. M. Kersh, Associate General Manager
Environmental Restoration and Waste Management

LAGF:dkf

Orig. and 1cc - R.M. Nelson, Jr.

Enclosures:

- (1) Draft ltr to Colorado Department of Health
- (2) Joule Heated Glass Melter Treatability Studies

DRAFT

DRAFT

DRAFT /

Colorado Department of Health
Hazardous Materials and Waste
Management Division
4210 East 11th Avenue
Denver, Colorado 80220

Attn: Mr. Gary W. Baughman, P.E.
Unit Leader, Hazardous Waste Facilities

Dear Mr. Baughman:

With this letter, Rocky Flats Plant is providing courtesy notification of our intent to study stabilization of hazardous, low-level mixed and TRU mixed wastes using a Joule Heated Glass Melter process. These glass encapsulation studies will be conducted on nitrate salts, and on polyvinyl chloride (PVC), combustibles and paper contaminated with trichloroethylene (TCE), trichloroethane (TCA), carbon tetrachloride, and other organic compounds as yet not determined.

The studies will be conducted in accordance with the "treatability study exemption" rule (6 CCR 1007-3 261.4[e,f]). The attached information provides a description of the intended studies with reference to the regulatory requirements for treatability studies.

If you have any questions, please contact Jim Kiefer of my staff at 966-5924, or Allen Schubert of EG&G Rocky Flats, Inc. at 966-5251.

cc:

B.P. Warner, EG&G Rocky Flats, Inc.

A.L. Schubert, EG&G Rocky Flats, Inc.

JOULE HEATED GLASS MELTER TREATABILITY STUDIES

Facilities conducting treatability studies pursuant to 6 CCR 1007-3 261.4 (e,f) are not subject to the requirements of 6 CCR 1007-3 261-268, Section 100 and the notification requirements of Section 99, provided that the treatability study exemption regulations found in 6 CCR 1007-3 261.4(f)(1) through (f)(14) are followed. The following information addresses the conditions of the treatability study exemption with reference to the Joule Heated Glass Melter Studies to be conducted at the Rocky Flats Plant.

1. **Notification:** The following Joule Heated Glass Melter treatability studies will begin no earlier than August 10, 1990. This letter serves as courtesy notification prior to beginning these treatability studies.
 - a. These glass encapsulation studies will be conducted on nitrate salts, and on polyvinyl chloride (PVC), combustibles and paper contaminated with trichloroethylene (TCE), trichloroethane (TCA), carbon tetrachloride, and other organic compounds as yet not determined.
 - b. To prevent the release of oxides of nitrogen (NO_x) to the atmosphere, the NO_x will be reacted with ammonia to produce water and nitrogen. In addition, all gases from the unit will be processed through a wet scrubber.
2. **EPA Identification Number:** The Rocky Flats Plant EPA identification number is CO7890010526.
3. **Single Day Limit:** The initial test run with materials containing hazardous materials may require up to 250 kg of "as received" waste; however, subsequent tests runs will consist of much smaller batches. The total of all waste treated at the Rocky Flats Plant under the Treatability Study Exemption will be less than 250 kg of waste per day.
4. **Storage Limit:** The maximum amount of treatability study waste which can be stored at any one time is 1000 kg. The total amount of hazardous waste to be treated by these treatability studies will not exceed 1000 kg per waste stream per treatment process per calendar year. The total quantity of "as received" non-acute hazardous waste stored at the treatability study units at the Rocky Flats Plant will not exceed 1000 kg.
5. **Storage Conditions:** Storage of waste samples and treatability study residues will meet the following minimum conditions:
 - a. Wastes and residues will be stored and managed to prevent releases to the environment and human health hazards.

**JOULE HEATED GLASS MELTER
TREATABILITY STUDIES
Continued**

- b. Any spilled or released waste material will be contained and collected within 24 hours.
 - c. The container storage areas will be designed and operated such that the containers or liners are compatible with the stored waste; the containers are protected from standing liquids; the containers remain closed (or contained by a glovebox) except when it is necessary to add or remove materials; and the contents of containers which are leaking or in poor condition will be transferred to a container in good condition or otherwise properly managed.
 - d. Any tank systems associated with this study will be designed and operated such that the tank integrity prevents leak, collapse, rupture, or failure while containing waste; any release will be detected, contained, collected and removed within 24 hours; and appropriate controls and practices will be followed to prevent spills and overflows.
 - e. Ignitable and reactive waste will be protected from any material or conditions that may cause the waste to ignite or react.
 - f. Contact between incompatible wastes will be prevented.
6. **Storage Timeframe:** After completion of the treatability test runs, the treated waste sample will be managed as a RCRA hazardous waste. Within 90 days, any unused sample and sample residues will be transferred to an authorized hazardous waste storage area, or will be shipped offsite to an authorized storage, treatment or disposal facility. All samples will be treated within one year of the sample collection date.
7. **Land Disposal and Open Burning Prohibitions:** The Joule Heater Glass Melter treatability studies will not involve the placement of hazardous waste on land or the open burning of hazardous waste.
8. **Records:** The Rocky Flats Plant will maintain records which document compliance with the treatment limits for at least three years. The records will include:
- a. The name, address, and EPA identification number of the generator:

U.S. Department of Energy
Rocky Flats Plant
P.O. Box 928
Golden, CO 80402

CO7890010526
 - b. The date the sample was collected and the name of the sample collector.
 - c. The date the sample was received at the treatability study unit and the quantity of sample received.
 - d. The quantity of "as received" waste in storage each day.

**JOULE HEATED GLASS MELTER
TREATABILITY STUDIES
Continued**

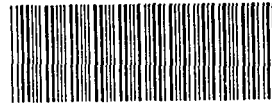
- e. The date the treatment study was initiated and the amount of "as received" waste introduced into storage each day.
 - f. The date the treatability study was concluded.
 - g. The date any unused sample or residues generated from the treatability study were returned to the generator or sample collector, or to a designated onsite storage unit. If the unused sample or residues are shipped offsite to an authorized storage, treatment or disposal facility, the facility's name and EPA identification number will be recorded.
9. **Contracts and Forms:** The Joule Heated Glass Melter treatability studies will be conducted at the Rocky Flats Plant; therefore, no treatability study contracts will be required. All documentation associated with sample collection and transfer of samples and residues will be kept for three years.
10. **Annual Report:** The facility will submit an annual report by March 15 of each calendar year which will include an estimation of the number of studies and the amount of waste expected to be used in treatability studies during the current calendar year, and the following information for the previous calendar year:
- a. The name, address, and EPA identification number of the facility conducting the treatability studies;
 - b. The types (by process) of treatability studies conducted;
 - c. The total quantity of wastes in storage each day;
 - d. The quantity and types of waste subjected to treatability studies;
 - e. When each treatability study was conducted;
 - f. The final disposition of residues and unused sample from each treatability study; and
 - g. A summary of spills or releases of waste material to the environment.
11. **Treatment Residues:** All unused samples and treatment residues will be handled as a hazardous waste. Unused samples and residues will be stored, manifested, transported, and treated or disposed as hazardous waste.
12. **Notification of Completion of Treatability Studies:** The Rocky Flats Plant will notify the Colorado Department of Health by letter when the plant no longer plans to conduct any treatability studies onsite.
14. **Certification at Completion:** The Rocky Flats Plant will submit a certified statement specifying that all waste materials from treatability studies have been removed from the treatability study units and that no contamination from the treatability studies remains at the treatability study units.
15. **Personnel Training:** The Rocky Flats Plant provides training to personnel to maintain regulatory compliance, to effectively respond to emergencies, and to prevent undue worker exposure to hazardous waste.

0026347

STATE OF COLORADO

COLORADO DEPARTMENT OF HEALTH

4210 East 11th Avenue
Denver, Colorado 80220
Phone (303) 320-8333



000025194



Roy Komer
Governor

Thomas M. Vernon, M.D.
Executive Director

December 14, 1987

Rockwell International
Rocky Flats Plant
P.O. Box 464, Bldg. 750
Golden, CO. 80402

Re: EPA ID No. C07390010526
Monitoring data reporting
requirements

Attn: Tom Greengard, RCRA/CERCLA Program Manager, Rockwell International

Dear Mr. Greengard:

Outlined below are the reporting requirements for interim status facilities under the Colorado Hazardous Waste Act regulations, 6 CCR 1007-3, 265.94 Subpart F. These regulations are enforceable for the units undergoing RCRA closure: the present landfill and west spray field under detection monitoring and the solar evaporation ponds under assessment monitoring. The detection monitoring and assessment monitoring programs are separate from the corrective action monitoring programs identified under the plant's CEARP program and therefore require separate reporting of data. CDH requests quarterly data submittals for the corrective action monitoring programs as well.

Under detection monitoring, results for two sets of parameters must be reported on a quarterly and annual basis as follows: (1) during the first year of detection monitoring the Part 265 Appendix III parameters, EPA Interim primary drinking water standards, must be analyzed for each monitoring well and results reported quarterly; any concentrations or values in excess of the maximum contaminant levels listed in Appendix III must be indicated and (2) the parameter set of pH, specific conductance, total organic carbon, and total organic halogen, must be analyzed and results reported at least annually. Significant differences from background wells must be identified and evaluated in accordance with 265.93 for each well. The evaluation must be submitted no later than March 1 following each calendar year.

For the first year of monitoring, concentrations or values of all parameters sets must be determined quarterly.

Additional reporting requirements include annual submittal of groundwater surface elevations at each well and an accompanying evaluation completed in accordance with 265.93(f). This information must be submitted no later than March 1 following each calendar year.

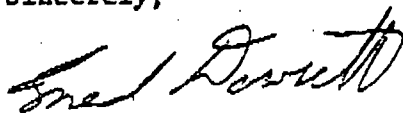
The groundwater quality assessment monitoring program must be evaluated annually. Reported information must include at a minimum, the rate of contaminant migration in the groundwater during the reporting period. The report must be submitted no later than March 1 following each calendar year.

Quarterly monitoring data for the RCRA detection monitoring program and the , water-level elevations and evaluations have not been submitted to CDH.

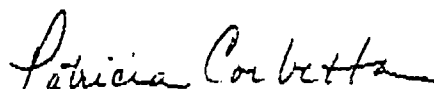
With regard to report format, CDH suggests that the data for all parameters be organized by regulated unit, sample location, sample matrix, and date of sampling. Background wells must be identified. An updated well-location map should also be submitted.

Questions regarding reporting requirements and suggestions for report format may be addressed to Patricia Corbetta at 331-4819.

Sincerely,



Fred Dowsett
Unit Leader,
Monitoring and Enforcement
Hazardous Waste Control Section



Patricia Corbetta
Geologist, Facilities Unit
Hazardous Waste Control Section

cc: Brent Lewis, Environmental Engineer,
Rocky Flats Plant

0021598 (P)

CORRESPONDENCE
OUTGOING LTR NO.

89 RF-2826

DIST.	LR	INC
SANCHINI, D.J.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
BADER, C.P.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ERFURDT, R.J.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HEINTZ, E.R.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HOOD, R.C.	<input type="checkbox"/>	<input type="checkbox"/>
DEKER, E.H.	<input type="checkbox"/>	<input type="checkbox"/>
KWIER, J.E.	<input type="checkbox"/>	<input type="checkbox"/>
KIRBY, W.A.	<input type="checkbox"/>	<input type="checkbox"/>
MCCNETT, J.F.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MEYERS, G.W.	<input type="checkbox"/>	<input type="checkbox"/>
ROECKER, J.H.	<input type="checkbox"/>	<input type="checkbox"/>
SHANNON, W.M.	<input type="checkbox"/>	<input type="checkbox"/>
WESTON, W.F.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
WOZNIAK, B.D.	<input type="checkbox"/>	<input type="checkbox"/>
YOUNG, E.R.	<input type="checkbox"/>	<input type="checkbox"/>

BETCHER, D.H.	<input type="checkbox"/>	<input type="checkbox"/>
CARNIVAL, G.J.	<input type="checkbox"/>	<input type="checkbox"/>
FERRERA, D.W.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HARMAN, L.K.	<input type="checkbox"/>	<input type="checkbox"/>
HEBERT, J.L.	<input type="checkbox"/>	<input type="checkbox"/>
HOEY, J.B.	<input type="checkbox"/>	<input type="checkbox"/>
HOFFMAN, R.B.	<input type="checkbox"/>	<input type="checkbox"/>
KLAMANN, R.L.	<input type="checkbox"/>	<input type="checkbox"/>
KRIEG, D.M.	<input type="checkbox"/>	<input type="checkbox"/>
LOUCENBURG, G.E.	<input type="checkbox"/>	<input type="checkbox"/>
MCKINLEY, K.B.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
NAIMON, E.R.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
NEWBY, R.L.	<input type="checkbox"/>	<input type="checkbox"/>
TURNER, W.L.	<input type="checkbox"/>	<input type="checkbox"/>
VELASQUEZ, R.N.	<input type="checkbox"/>	<input type="checkbox"/>
ANDERSON, M.B.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GREEN, B.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HICKEY, M.B.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CORRESP. ADMIN.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CONTRACT ADMIN.	<input type="checkbox"/>	<input type="checkbox"/>
MUNENY, F.X.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SCHUBERT, A.K.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TALBOT, M.B.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
WILSON, J.B.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CLASSIFICATION	
UNCLASSIFIED	<input checked="" type="checkbox"/>
CONFIDENTIAL	<input type="checkbox"/>
SECRET	<input type="checkbox"/>

AUTH/CLASSIFIER SG.

DATE 8-15-89
IN REPLY TO LTR NO.

DEC 1

LTR APPROVALS

R.M. - X.M.

W.F. - X.M.

W.F. - X.M.

ORG. & PROJECT INITIALS

AL - J.A.

22 SEP 1989 1 2911

Rocky Flats Plant
Aerospace Operations
Rockwell International Corporation
P.O. Box 464
Golden, Colorado 80402-0464
(303) 966-7000

Contractor to U.S. Department of Energy



Rockwell
International



000025195

AUG 16 1989

89-RF-2826

Edward S. Goldberg
Acting Area Manager, RFO

CONTINGENCY PLAN IMPLEMENTATION REPORT NO. 89-012

Enclosed is a proposed letter to the Colorado Department of Health which transmits RCRA Contingency Plan Implementation Report Number 89-012, also enclosed. This report describes the overflow of water from the Solar Pond's Interceptor Trench Central Sump. The RCRA Contingency Plan Implementation Report should be delivered to the Colorado Department of Health by August 22, 1989 [per 6 CCR 1007-3, 265.56(j)].

If you have any questions, please call me on extension 4361.

Dominick J. Sanchini
Dominick J. Sanchini
President

Orig. and lcc - E. S. Goldberg

Enc.

0021599

0021599(c)



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DRAFT

DRAFT

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DRAFT

DRAFT

David C. Shelton, Director
Hazardous Materials & Waste Management Division
Colorado Department of Health
4210 East 11th Avenue
Denver, Colorado 80220

Dear Mr. Shelton:

Attached is Resource Conservation and Recovery Act Contingency Plan Implementation Report No. 89-012 which documents the overflow of water from the Solar Pond's Interceptor Trench central sump.

Please feel free to contact Mark E. Van Der Puy, of my staff, at telephone 966-2473 if you have any questions regarding this report.

Sincerely,

Edward S. Goldberg
Acting Area Manager

Enclosure

cc:
EPA

RCRA CONTINGENCY PLAN
Implementation Report No. 89-012

RCRA CONTINGENCY PLAN
IMPLEMENTATION REPORT
ROCKY FLATS PLANT
EPA ID NUMBER C07890010526

This report is made in compliance with the requirements of 6 CCR 1007-3, Part 265.56(j) for a written report within 15 days of the implementation of the RCRA Contingency Plan. The requirements for this report are given below, and will be addressed in the order listed, excerpted from 6 CCR 1007-3, Part 265.56:

"(j) . . . Within 15 days after the incident, he must submit a written report on the incident to the Department. The report must include:

- (1) Name, address, and telephone number of the owner or operator;
 - (2) Name, address, and telephone number of the facility;
 - (3) Date, time, and type of incident (e.g., fire, explosion);
 - (4) Name and quantity of material(s) involved;
 - (5) The extent of injuries, if any;
 - (6) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
 - (7) Estimated quantity and disposition of recovered material that resulted from the incident."
-

- (1) Name, address and telephone number of the owner of the facility:

United States Department of Energy
Rocky Flats Plant
Post Office Box 928
Golden, Colorado 80402

(303) 966-2025

Facility Contract:
Edward S. Goldberg, Acting Area Manager

- (2) Name, address and telephone number of the facility:

U. S. Department of Energy
Rocky Flats Plant
Post Office Box 928
Golden, CO 80402

(3) Date, time and type of incident:

(A) Description

On August 7, 1989 at approximately 0800 hours, Liquid Waste Operations personnel discovered that the Solar Pond's Interceptor Trench Central Collection Sump Pit was overflowing. The central collection sump pit consists of a wet well to which intercepted ground water and seepage from the Solar Ponds flow into by gravity. The water is then pumped, via two pumps located adjacent to the sump pit in the Interceptor Trench Pump House, to Solar Pond 207B North. Upon discovery of the water overflowing the sump pit, the operator immediately checked the breaker box located inside the pump house and discovered that the circuit breakers for the pumps were in the "tripped" position. Both breakers were reset to the "on" position and the remaining water in the collection sump pit was pumped to Solar Pond 207B North.

The Shift Superintendent, RCRA/CERCLA Programs, Liquid Waste Operations' Management and Environmental Management were notified. A sample of the water in the collection sump pit was sampled and analyzed by the General Laboratories (See Section 4, below).

(B) Corrective Action:

Plant maintenance was immediately contacted and is investigating the cause of the circuit breaker trip. Until the cause of the circuit breaker trip is known and corrected, the pit will be inspected three times each day.

(4) Name and Quantity of Materials Involved:

The liquid collected by the sump pit is ground water and seepage from the Solar Ponds. It is difficult to estimate the quantity of water which overflowed the wet well and onto the ground, but the quantity probably ranges from 50 to several hundred gallons. Analysis of the sample taken from the sump pit (post-incident) are as follows:

pH	7.3
TDS	2.27 mg/l
Gross Alpha	95 ± 38 pCi/l
Nitrate (NO ₃)	2200 mg/l
Chloride	114 mg/l
Chloroform	3 ug/l *
Carbon Tetrachloride	3 ug/l *
Trichloroethene	6 ug/l *
Tetrachloroethene	1 ug/l *

* This data is preliminary and has not been validated.

(5) Extent of Injuries:

No injuries occurred as a result of this incident.

(6) An Assessment of Actual or Potential Threat to Human Health and the Environment:

The material involved in this incident was ground water and seepage from the Solar Ponds. Based on the analyses of the water collected from the pit, it does not appear that an actual or potential threat to human health or the environment occurred as a result of this incident.

(7) Estimated Quantity and Disposition of Recovered Material That Resulted From The Incident:

None of the water that overflowed the sump pit was recovered. The water remaining in the sump pit was pumped into Solar Pond 207B North.

0021604

CORRES. CONTROL
OUTGOING LTR. NO.

88-3939

Rocky Flats Plant
Aerospace Operations
Rockwell International Corporation
P.O. Box 464
Golden, Colorado 80402-0464
(303) 966-7000

Contractor to U.S. Department of Energy



Rockwell
International



000025197

December 20, 1988

88-RF-3939

Albert E. Whiteman
Area Manager
DOE, RFAO

RESPONSE TO EPA INSPECTION FINDINGS OF NATIONAL POLLUTANT DISCHARGE
ELIMINATION SYSTEM (NPDES) PERMIT

This letter is to the attention of Rich Schassburger, Physical
Scientist, DOE-RFAO.

Attached is a letter outlining the corrective actions and explanation
of the change in analysis methodology for Nitrate as N analysis as
performed by the 881 General Laboratory in response to the deficiency
noted by the EPA's October 13, 1988 inspection of the Rocky Flat NPDES
Permit compliance.

The letter from the EPA summarizing the deficiency found during the
inspection has requested that a response of the corrective actions be
issued by January 21, 1988. Please forward a copy of the response by
this due date to the following address:

Mr. Jerry Cross, Compliance Branch
Water Management Division
999 18th Street, Suite 500
Denver, Colorado 80202-2405

Please contact F. D. Hobbs (extension 7006) if any questions arise on
this issue or additional information is required.

R. J. Erfurdt
R. J. Erfurdt, Director
Health, Safety and Environment

Orig. and 1 cc - A. E. Whiteman
Enc.

DIST	LTR	ENCL
SANCHINI, D. J.	X	X
BADER, C. P.		
CAMPBELL, G. W.		
HOOD, R. C.		
KINZER, J. E.		
KIRBY, W. A.		
MCNETT, J. F.		
MEYERS, G. W.		
ROECKER, J. H.		
SHANNON, W. M.		
SMITH, R. E.		
WEIDNER, C. W.		
WESTON, W. F.		
WOZNIAK, B. D.		
YOUNG, E. R.		
ERTWIDT, R. S.	X	X
BETCHER, D. H.		
CARNIVAL, G. J.		
HARMAN, L. K.		
HERBERT, J. L.		
HOEY, J. B.		
HOFFMAN, R. B.		
KLAMANN, R. L.		
KRIEG, D. M.		
LIM, B. W.		
LOUDENBURG, G. E.		
NAIMON, E. R.		
NEWBY, R. L.		
TURNER, H. L.		
VELASQUEZ, R. N.		
CORRES. CONTROL	X	
HOBBS, F. D.	X	X
SETLAGE, G. H.	X	X
SUNDLUND, C. L.	X	X
CLASSIFICATION		
UNCLASSIFIED	X	X
CONFIDENTIAL		
SECRET		

AUTH. CLASSIFIER SIG.
C. A. Guterbell
12-12-88

DATE
IN REPLY TO LTR. NO.

CC: EPA DEF.

LTR APPROVALS

245
in file

FORM 3 (Rev. 11/85)

C.L.S. ns

RF-46469 (Rev. 2/88)

DRAFT

DRAFT

DRAFT

Mr. Jerry Cross, Compliance Branch
Water Management Division
999 18th Street, Suite 500
Denver, Colorado 80202-2405

Dear Mr. Cross:

This letter addresses the corrective actions taken on the audit finding noted during the annual NPDES compliance inspection at the Rocky Flats Plant on October 13, 1988.

The deficiency has been corrected and a summary of the deficiency and corrective actions taken is given below.

SUMMARY OF DEFICIENCY

Deficiency

Nitrate as N analysis is not done within the required holding time.

Corrective Action Taken

The 881 General Laboratory changed the method of analysis for Nitrate as N in November, 1987 from the Brucine sulfate method (Procedure 352.1 of Table 1B, 40 CFR 136.3) to Nitrate-Nitrite as N (Procedure 353.1 of Table 1B, 40 CFR 136.3). The samples are being preserved with sulfuric acid to a pH of < 2. The maximum holding time is 28 days for the preserved sample using procedure 353.1. The Nitrite analysis was not run for these samples and therefore was not subtracted from the Nitrate-Nitrite as N results. From previous data the level of Nitrite in the samples were negligible in comparison to the Nitrate level. Therefore, a combined elevated value of Nitrate-Nitrite as N has been reported in place of a single lower value of Nitrate only.

The Nitrite as N analysis now is performed by a slight modification of EPA method 353.1. This analysis will be run and reported along with the Nitrate-Nitrite as N result. The maximum holding time of 48 hours on an unpreserved sample as defined in Table 1B, 40 CFR 136.3 will be observed.

Samples run before November, 1987, using Method 352.1 were preserved with sulfuric acid to a pH of < 2 which is the same preservation used for the Nitrate-Nitrite as N analysis required in Method 353.1. Because the preservation stated for the Nitrate-Nitrite as N sample extends the hold time to 28 days, it is our feeling that the preserved Nitrate as N sample also has an extended hold time of 28 days.

A comparison of random samples throughout the fourth quarter of 1987 was done for both Method 353.1 and Method 352.1. It was found that the Nitrate as N preserved samples and the Nitrate-Nitrite as N samples gave results within five percent, which is the uncertainty of each methodology. Preservation and maximum holding times were observed for both methods.

We trust the corrective actions and explanation of the change in analysis methodology listed above will satisfy your request for a summary report on the actions taken to correct the documented deficiency.

If you have any questions, please call Mr. Farrel Hobbs, Manager of the Environmental Management Group at 966-7006.